PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Ryuji UENO, et al.

Appln. No.: 09/816,655

Confirmation No.: 5746

Filed: March 26, 2001

Docket No: Q58513

Group Art Unit: 1614

Examiner: Zohreh A. FAY

For: APOPTOSIS INHIBITOR

REQUEST FOR RECONSIDERATION

Commissioner for Patents
Washington, D.C. 20231

Sir:

In response to the Office Action dated February 27, 2002, please consider the following remarks.

REMARKS

Preliminary Matter

Applicants note that an Information Disclosure Statement, a Statement under 37 C.F.R. § 1.97(e), and a PTO-1449 form with references were filed on April 24, 2002. Applicants respectfully request that the Examiner consider the disclosed information and return an initialled PTO-1449 form to the undersigned.

Rejection under 35 U.S.C. § 112, First Paragraph

At the top of page 2 of the Office Action, the Examiner rejects claims 1-18 under the first paragraph of 35 U.S.C. § 112 as being based on a non-enabling disclosure for the scope of the

claims. The Examiner's view is that the specification as filed does not support the scope of the method for treating essentially any disease or condition associated with apoptosis. The Examiner concludes that this particular art is unpredictable and as a result undue experimentation would be required to determine exactly what conditions or diseases associated with apoptosis could be treated using the compounds of the present claims.

In response, Applicants submit that it is known to the art that conditions and diseases being associated with apoptosis can be treated by inhibiting apoptosis. In support of this, Applicants submit herewith the following literature references:

(1) Liu and Cho, Digestion 2000, pp 632-239 (Applicants note this reference is not prior art). Liu shows that pentoxifline inhibits apotosis and is useful for treatment of gastric ulcer which is believed being associated with apoptosis (see conclusion, Figs. 4 and 5).

(2) Sakai et al., Nature Medicine, Vol. 7, No. 3, 2001, pp 324-330 (Applicants note this reference is not prior art). This reference discloses that fibronectine protects many kinds of cells against apoptosis and that fibronectine is effective for treatment of cerebral infarction being associated with apoptosis.

(3) V.L. Longsthorne and G.T. Williams, The EMBO Journal, Vol. 16, No. 13, 3805-3812 (1997) discloses that cancers and autoimmune disease as well as degenerative disease, all of which are associated with apoptosis, could be treated by inhibiting apoptosis.

The instant inventors confirmed the effect of the compound to inhibit apoptosis by means of the well-known TUNEL (TdT-mediated dUTP Nick End Labeling method) staining method.

According to this method, apoptotic cells are stained to allow detection and quantification of apoptosis in tissue sections (see the manufacturer's instructions in the introduction of "The Complete ApopTag® Manual" submitted herewith). That is, the Test Example of the instant specification (pages 25-26) directly demonstrates that the compound of the invention prevents apoptotic cell death. That is, the compound of the invention directly inhibits apoptosis and therefore is useful for treatment of a condition or disease associated with apoptosis.

In view of the above, Applicants submit that the present application satisfies the requirements of 35 U.S.C. § 112, first paragraph. Accordingly, withdrawal of this rejection is respectfully requested.

Obviousness Rejection

On page 3 of the Office Action, the Examiner rejects claims 1-18 under 35 U.S.C. § 103(a) as being obvious to one of ordinary skill in the art over the Aoyama-Hayashi et al. literature reference. The Examiner's position is that since it is known that PGE_1 does inhibit apoptosis, that it will be obvious to one of ordinary skill in the art that various PGE_1 derivatives would have the same utility. The Examiner notes that there is no comparative data present in the application comparing PGE as used in the prior art with PGE derivatives within Applicants' claims.

In response, Applicants wish to point out that all the compounds within Applicants' claims are of a 15-keto metabolite structure and that the skilled artisan would not expect such metabolite structures to have all the properties of the naturally occurring type PGE structures.

In this regard, Applicants submit herewith Padilla et al., The Journal of Immunology 2000, 165: 6941-6948 (Applicants note that this reference is not prior art). It discloses that a PG compound in which 15-position is deoxy induces apoptosis.

That is, the effect of a 15-dehydroxy PG on apoptosis is opposite to that of a 15-hydroxy PG. Thus, Applicants submit that one of ordinary skill in the art could not predict the effect of the compound of the instant invention.

Thus, Applicants submit that the present invention is not obvious over the Aoyama-Hayashi et al. literature reference. Accordingly, withdrawal of this rejection is respectfully requested.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

Louis Gubinsky / Bruce E. Kramer Reg. No. 33,725

Louis Gubinsky
Registration No. 24,835

SUGHRUE MION, PLLC
2100 Pennsylvania Avenue, N.W.
Washington, D.C. 20037-3213
Telephone: (202) 293-7060
Facsimile: (202) 293-7860
Date: August 22, 2002